



Aviation Investigation Final Report

Location:	STAPLES, Minnesota	Accident Number:	CHI95LA311
Date & Time:	September 3, 1995, 10:45 Local	Registration:	N9425B
Aircraft:	CESSNA 175	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 Minor, 2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

THE PILOT SAID HE WAS FLYING HIS AIRPLANE ABOUT 1,000 FEET ABOVE A SWAMP, WHEN THE ENGINE LOST POWER. HE APPLIED CARBURETOR HEAT, WHEN HE NOTED AN AUDIBLE INDICATION OF THE POWER LOSS. DURING A FORCED IN THE SWAMP, THE AIRPLANE NOSED OVER IN WATER THAT WAS TWO FEET DEEP. THE CARBURETOR SEPARATED FROM THE ENGINE DURING THE OCCURRENCE, BUT NO PREACCIDENT/MECHANICAL ANOMALY WAS FOUND THAT WOULD HAVE PREVENTED THE PRODUCTION OF POWER. THE TEMPERATURE AND DEW POINT WERE 83 AND 66 DEGREES F, RESPECTIVELY. ACCORDING TO ICING PROBABILITY CHARTS, ATMOSPHERIC CONDITIONS WERE CONDUCIVE FOR CARBURETOR ICING.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the pilot's delay in the application of carburetor heat, which resulted in carburetor ice, loss of engine power, and a subsequent forced landing in a swampy area. The carburetor icing (weather) condition was a related factor.

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - NONMECHANICAL
Phase of Operation: CRUISE

Findings

1. (F) WEATHER CONDITION - CARBURETOR ICING CONDITIONS
2. (C) FUEL SYSTEM, CARBURETOR - ICE
3. (C) CARBURETOR HEAT - DELAYED - PILOT IN COMMAND

Occurrence #2: FORCED LANDING

Phase of Operation: EMERGENCY DESCENT/LANDING

Occurrence #3: NOSE OVER

Phase of Operation: EMERGENCY LANDING

Findings

4. TERRAIN CONDITION - SWAMPY

Factual Information

On September 3, 1995, at 1045 central daylight time (cdt), a Cessna 175, N9425B, piloted by a private pilot, was substantially damaged during a forced landing in a swamp. The pilot reported a total loss of power during cruise flight. Visual meteorological conditions prevailed at the time of the accident. The personal 14 CFR Part 91 flight was not operating on a flight plan. The pilot and one passenger reported no injuries. A second passenger reported minor injuries. The flight departed a restricted landing area near Staples, Minnesota, at 1035 cdt.

According to the pilot's statement on NTSB Form 6120.1/2, "...the engine lost RPM and stopped, I checked all my gauges and found no problem... ." He said the airplane was flying over a swamp at 1,000 feet above the ground. After calling a "mayday" over the radio the pilot said he headed the airplane toward a green field. Soon after doing so he realized it was too far away and ended up landing in the swamp. The airplane nosed over during the landing sequence. It was resting in about two feet of water when the passengers and pilot exited the airplane.

During an interview the pilot said the airplane had its fuel tanks topped off before the flight. He said he did not observe any water in the fuel samples taken during the preflight inspection. The pilot said the airplane's engine "fluttered" one time and then promptly quit. He said he applied full carburetor heat when he heard the flutter sound. He said the engine may have stopped running due to carburetor ice.

The NTSB was represented on-scene by a Federal Aviation Administration (FAA) Principal Maintenance Inspector (PMI). The on-scene examination revealed fuel in N9425B's fuel tanks and engine mechanical continuity. The PMI said the magnetos were examined and sparked when hand rotated. The carburetor had separated from the engine during the collision sequence. Fuel was found in the accelerator pump chamber. No water was observed in the chamber's fuel.

According FAA carburetor icing probability charts, the atmospheric conditions were conducive to carburetor icing. Copies of two charts are appended to this report.

Pilot Information

Certificate:	Private	Age:	45, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Valid Medical-w/ waivers/lim	Last FAA Medical Exam:	March 22, 1995
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	167 hours (Total, all aircraft), 100 hours (Total, this make and model), 101 hours (Pilot In Command, all aircraft), 11 hours (Last 90 days, all aircraft), 2 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	CESSNA	Registration:	N9425B
Model/Series:	175 175	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	55225
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	September 12, 1994 Annual	Certified Max Gross Wt.:	2350 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	2771 Hrs	Engine Manufacturer:	Continental
ELT:	Installed, not activated	Engine Model/Series:	GO-300-A
Registered Owner:	JEROL MADISON	Rated Power:	175 Horsepower
Operator:		Operating Certificate(s) Held:	None
Operator Does Business As:		Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	BRD ,1226 ft msl	Distance from Accident Site:	27 Nautical Miles
Observation Time:	11:45 Local	Direction from Accident Site:	85°
Lowest Cloud Condition:	4000 ft AGL	Visibility	20 miles
Lowest Ceiling:	Broken / 5000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	6 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	160°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	28°C / 19°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	LINCOLN , MN (RLA)	Type of Flight Plan Filed:	None
Destination:	(SAZ)	Type of Clearance:	None
Departure Time:	10:35 Local	Type of Airspace:	Class G

Airport Information

Airport:		Runway Surface Type:	
Airport Elevation:		Runway Surface Condition:	
Runway Used:	0	IFR Approach:	
Runway Length/Width:		VFR Approach/Landing:	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 Minor, 1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Minor, 2 None	Latitude, Longitude:	46.359676,-94.800476(est)

Administrative Information

Investigator In Charge (IIC):	Gattolin, Frank
Additional Participating Persons:	BRUCE KOZIAN; MINNEAPOLIS , MN
Original Publish Date:	November 11, 1996
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=10022

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The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).